

Blessington Greenway

Quality Audit (including Stage 1 RSA)

Wicklow County Council

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Quality information

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1. Introduction

1.1 Overview

AECOM have been commissioned by Wicklow County Council (WCC), to undertake a Quality Audit (QA) report of the proposed Blessington Greenway. As part of this scheme there are six different sections that have been examined as part of this audit which are as follows:

- Blessington
- Baltyboys
- Tulfarris
- Valleymount
- Ballyknockan
- Lackan

This Quality Audit (QA) includes the following audits:

- Design Manual for Urban Roads ad Streets (DMURS) Street Design Audit;
- Access Audit;
- Cycle Audit;
- Walking Audit; and
- Stage 1 Road Safety Audit

This QA aims to demonstrate that appropriate consideration has been given to all relevant aspects of the development in accordance with DMURS May 2019, and the supplementary DMURS Advice Note 4 Quality Audits, which was issued as part of the May 2019 update. It should be noted that this QA examines the road and street elements of the scheme proposals rather than the play area, structures, etc.

The QA consists of a number of individual and overlapping audits, as described in DMURS. This report will cover a number of sections, including a short site description and results of the DMURS Street Design Audit, Access Audit, Cycling Audit, Walking Audit and Stage 2 Road Safety Audit.

The Audits will assess how the proposed scheme provides for all road users. From the results of the five audits, a number of proposals will be put forward to improve conditions for vulnerable road users (pedestrians, cyclists, motorcyclists, children and elderly citizens).

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The QA comprised of an examination of the proposed scheme drawings and a site visit. The site visit took place on the 2nd of May 2023. The weather was clear with a dry road surface. The site visit was undertaken between the hours of 11:30 and 17:00 during daylight.

This QA has been carried out in accordance with DMURS (May 2019), and Transport Infrastructure Ireland (TII) guidance GE-STY-01024 for Road Safety Audits.

The problems identified and described in this report are considered by the Audit Team to require action in order to improve the safety of the scheme and minimise collision/incident risk.

1.2 Quality Audit Scope

The geographical scope of this QA considers the subject scheme internal site layout, the site access junctions and interface, detailing the proposed scheme:

"Wicklow County Council, in association with Transport Infrastructure Ireland are working to develop a greenway to travel around the Poulaphouca Reservoir (also known as the Blessington Lakes) in Blessington, County Wicklow, as show in Figure 1-1.

The overall scheme length is approximately 32.8km, predominately off-road shared use path for pedestrians and cyclists divided into six sections, Lackan, Ballyknockan, Valleymount, Baltyboys and Blessington. The route will provide a facility for pedestrians and cyclists along the shoreline of the reservoir and will pass through the townlands of Baltyboys Lower, Tulfarris, Rathballylong, Baltyboys Upper, Monamuck, Valleymount, Annacarney, Carrigacurra, Ballyknockan, Ballynastockan, Lacken, Sroughan, Carrig, Knockieran Upper, Knockieran Lower, Blessington and Burgage More and the villages of Valleymount, Ballyknockan and Lacken before returning to Blessington at Knockieran Bridge."



Figure 1-1 – Blessington Greenway (Source: Google Maps)

The following documents were reviewed by the audit team:

- 60617025_SHT_DD_BLGKY_101 -Key plan Blessington Lake, Co. Wicklow
- 60617025_SHT_DD_BLGKY_100-Site Location Plan Sheet 1-9
- 60617025_SHT_DD_BLGKY_142-Preliminary design Ballyknockan

- 60617025_SHT_DD_BLGWY_142-Preliminary design Baltyboys
- 60617025_SHT_DD_BLGWY_142-Preliminary design Blessington
- 60617025_SHT_DD_BLGWY_142-Preliminary design Lackan
- 60617025_SHT_DD_BLGWY_142-Preliminary design Tulfarris
- 60617025_SHT_DD_BLGWY_142-Preliminary design Valleymount

1.3 Quality Audit Procedure

DMURS states that “*the intention of a Quality Audit is not to pass or fail a design rather it is intended as an assessment tool that highlights the strengths and weaknesses of a design and a documented process of how decisions were made.*”

As noted in DMURS Advice Note 4 “*there is no set format for Quality Audits*” and that “*Quality Audits have not been widely prepared in Ireland*”, as such no formal detailed guidance has been published here to date. Accordingly, until the publication of such guidance in Ireland, AECOM continue to use our internally derived Quality Audit report structure which has been compiled in reference to international best practice guidance including, amongst others, the Department for Transport (UK) Traffic Advisory Leaflet 5/11 “*Quality Audit*”, and the CIHT document “*Manual for Streets 2*”. Through the adoption of the guidance detailed within the aforementioned documents, AECOM submit that this Quality Audit complies fully with the requirements introduced in DMURS.

The definition of a Quality Audit is provided within the Department for Transport (DoT) (UK) Traffic Advisory Leaflet 5/11 “*Quality Audit*”, and states:-

“QA is a defined process, independent of, but involving, the design team, that through planning, design, construction and management stages of a project, provides a check that high quality places are delivered and maintained by all relevant parties, for the benefit of all end users. QA is a process, applied to highway, traffic management or development schemes, which systematically reviews projects using a series of discrete but linked evaluations and ensures that the broad objectives of a place, functionality, maintenance and safety are achieved.”

For developer led schemes the QA is an integral element of the development team approach through which all relevant disciplines contribute to the planning process. The QA seeks to identify a set of clear, agreed outcomes and recommendations that are fed back into the design process through discussion and agreement with the relevant parties of the design team (e.g. architects, planners, engineers etc.). The QA process is summarised in Figure 1.2 below.

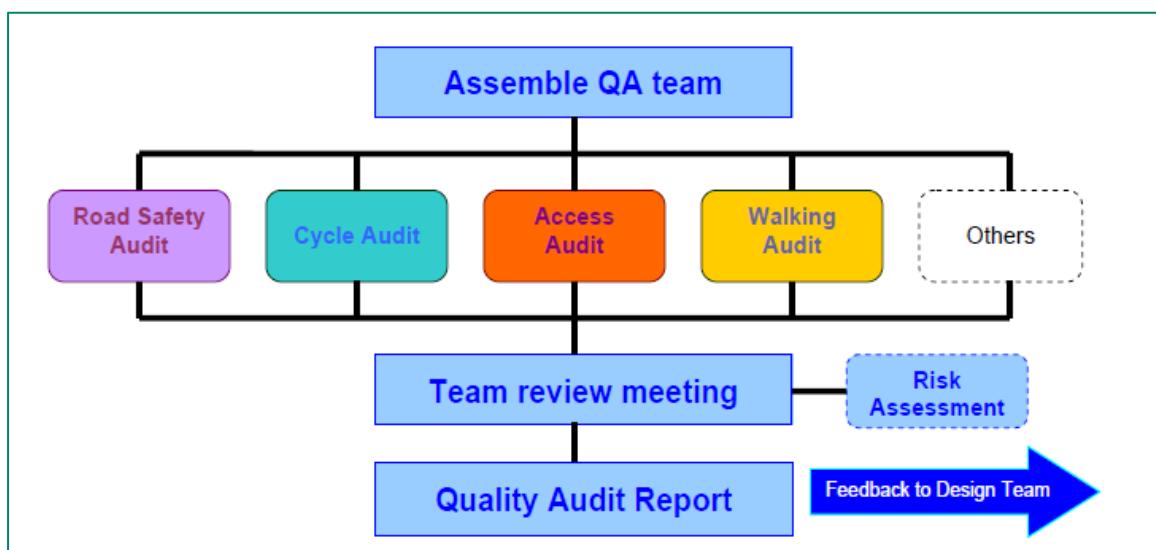


Figure 1.2 – Quality Audit Process (Source: DoT, UK)

1.4 Departures from Standard

No Departures from Standards have been notified to the Audit Team.

2. Site Description

2.1 Overview

The scheme consists of upgrading existing sections of the Blessington greenway and proposals for new sections of greenway along the shores of the Poulaphouca Reservoir and the surrounding environs in Blessington, County Wicklow. The scheme is approximately 32.8 km in length (total) and mainly consists of the provision of an off-road greenway, with on road sections for the Blessington and Tulfarris schemes. The length of each section and the provision are presented in Table 2.1-1.

Table 2.1-1 – Scheme sections lengths and provisions

Section	Length	Scheme Provision
Blessington	9.1km	Widen existing path
Baltyboys	5.3km	Shared path for pedestrians and cyclists
Tulfarris	3.7km	Shared path for pedestrians and cyclists. Section sharing with low volume traffic.
Valleymount	4.8km	Shared path for pedestrians and cyclists
Ballyknockan	4.3km	Shared path for pedestrians and cyclists
Lackan	5.6km	Shared path for pedestrians and cyclists
Total	32.8km	

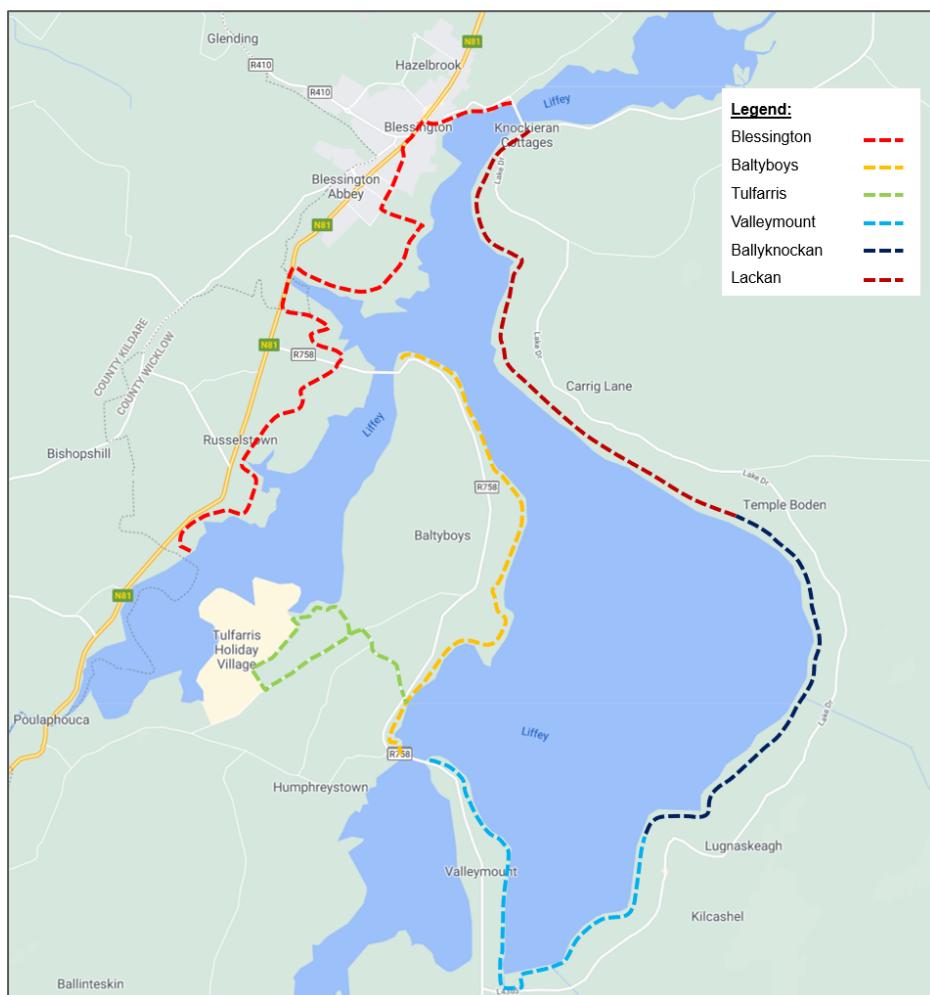


Figure 2-1 – Blessington Greenway Scheme Route Sections (Source: Google Maps)

Table 2.1-2 provides a summary of the scheme location and context.

Table 2.1-2 – Summary of Scheme Location

Locations:	Poulaphouca Reservoir, Blessington, Co. Wicklow
Classification:	National, Regional and Local Roads
Speed Limit:	100 km/hr – N81 (outside of Blessington) 80 km/hr – All other routes 60 km/hr – N81 (approach to Blessington) 50km/hr – Blessington Town, Valleymount Village, Ballyknockan Village, Lackan Village
Local Authority Area:	Wicklow County Council
Type of Roads:	Single Carriageway Roads, Rural and Urban Environment

2.2 Site Observations

Blessington

- Blessington Town is situated along the N81. Main Street is a two-way road carriageway with parking available on both sides of the road. Main Street / Kilbride Road junction is a priority-controlled T-junction, with a controlled crossing provided on the southern arm of the junction. The Main Street (N81) / Naas Road (R410) junction is a priority-controlled T-junction.
- The proposed greenway continues south from Blessington Town on Rockypool Villas and Troopersfield (L8858) to The Avon. There is a number of priority junctions along this route which provide access to residential developments, industrial estates and a business park.
- From The Avon, the route follows as an offline route until it ties back to the N81 on the Lakeview, using the N81 bridge as a crossing point, again continuing as an offline route southeast of the bridge, until it is crossing the R758 west of the Baltyboys Bridge.
- From the R758, it continues on an offline route crossing through the Russelstown Wood until it meets the Russborough via a tunnel, linking back to the existing path.

Baltyboys

- The Baltyboys section is accessed through the car park on the eastern side of the Baltyboys Bridge off the R758 via a simple priority junction. It continues offline adjacent to the edge of the lake. Along the Greenway route there is one road crossing located at the Blessington Lakes Sailing Club at Chainage 3+000m. A connection is proposed to be provided linking the Baltyboys and Tulfarris sections at Chainage 4+700m at the junction of the R758 and L8360. The scheme ends at the Baltyboys Bridge and Valleymount Carpark.

Tulfarris

- The Tulfarris section utilises the existing L8360 as an on-road cycle connection. The on-road section is approximately 3.7km in length. The L8360 is a local two-way carriageway which features several accesses to residential properties, local roads and the Tulfarris Hotel & Golf Resort. A connection crossing the R758 is proposed linking the Baltyboys and Tulfarris sections opposite the junction of the R758 and L8360.

Valleymount

- The Valleymount section is accessed through the Valleymount East Carpark off the R758 by a simple priority junction. Along the route there is connection to the road network at the crossing at Annacarney Bridge, and a connection with the Ballyknockan Village via Bog Road, where the scheme connects to Ballyknockan Scheme. There are no other interactions with the road network.

Ballyknockan

- The Ballyknockan section is accessed from the Bog Road, and it connects to the south with the Valleymount Section, and to the north with the Lackan Section. The proposed Greenway route runs adjacent to the edge of the lake and there are no other connections with the public road network.

Lackan

- The Lackan section is accessed from a laneway adjacent to the Lackan National School with no dedicated parking. The Lackan route terminates at the Knockieran car park. There are no other interactions with the road network.

Vehicular Traffic

Throughout the scheme: From the observations during the site visit the majority of motorists appeared to obey the speed limits.

- Blessington – The N81 has a posted speed limit of 100 km/hr which transitions to 60 km/hr on northbound approach to Blessington Town and then reduces further to 50 km/hr through the town.
- Baltyboys – The posted speed limit along the R758 is 80km/hr.
- Tulfarris – The posted speed limit along the R758 is 80km/hr.
- Valleymount – The posted speed limit on the R758 approaching and leaving Valleymount Village is 80km/hr. The posted speed limit within the village is 50km/hr.
- Ballyknockan – The posted speed limit along Lake Drive is 80km/hr. Upon entering the village, the speed limit reduces to 50km/hr.
- Lackan – The posted speed limit along Lake Drive is 80km/hr. Upon entering Lackan village the speed limit reduces to 50km/hr.

Pedestrians and Cyclists

- Blessington - There are designated pedestrian footpaths on the eastern and western side of the road carriageway through Blessington Town. There are no designated/segregated cycle facilities, cyclists share the road space with vehicles.
- For the remaining sections there are no designated pedestrian footpaths or cycle ways outside of the bridge crossing points which provide a narrow route which is protected by a grass barrier.

Street Lighting

- Blessington - Street lighting is present on both sides of the road network throughout the extents of the town.
- Ballyknockan – Street lighting on the western side of the road carriageway is located only within the immediate extents of the village.
- Valleymount – Street lighting on the eastern side is located only within the immediate extents of the village.
- For the remaining sections no street lighting was noted.

Collisions

- The audit team have not been informed of any collisions within the vicinity of any of the schemes.

3. DMURS Street Design Audit

3.1 Overview

The DMURS Street Design Audit is an auditing tool that can be used to ensure that the relevant issues contained within DMURS have been duly considered. The DMURS Street Design Audit is primarily concerned with four major aspects of street design:

- Connectivity;
- Self-Regulating Street Environment;
- Pedestrian and Cycling Environment; and
- Visual Quality.

3.2 Connectivity

Connectivity					
Ref	Key Issues	Key DMURS Reference	Conforms	Street Design Audit Comment	Action
3.2.1	Strategic routes/major desire lines been identified and are clearly incorporated into the design.	3.1 – Integrated Street Network 3.2.1 – Movement Function 3.3.1 – Street layouts 3.3.4 – Wayfinding	Yes	No action required	No Action
3.2.2	Multiple points of access are provided to the site/place, in particular for sustainable modes.	3.3.1 – Street Layouts 3.3.3 – Retrofitting	Yes	No action required	No Action
3.2.3	Accessibility throughout the route is maximised for pedestrians and cyclists, ensuring route choice.	3.3.1 – Street Layouts 3.3.2 – Block Sizes 3.4.1 – Vehicle Permeability	Yes	No action required	No Action
3.2.4	Through movements by private vehicles on local streets are discouraged by an appropriate level of traffic calming measures.	3.2.1 – Movement Function 3.2.2 – Place Context 3.4.1 – Vehicle Permeability	Unknown	Details in shared street areas such as Rockypool Villas in Blessington have not provided to the audit team.	Ensure there is traffic calming measures in place.

3.3 Self-Regulating Street Environment

Self-Regulating Street Environment					
Ref	Key Issues	Key DMURS Reference	Conforms	Street Design Audit Comment	Action
3.3.1	A suitable range of design speeds have been applied with regard to context and function.	3.2.1 – Movement Function. 3.2.2 – Place Context. 4.1.1 – A Balanced Approach to Speed	Unknown	Details in shared street areas such as Rockypool Villas have not provided to the audit team.	Ensure the design speeds are appropriate along the route, on the section of the Quiet Roads.
3.3.2	The street environment will facilitate the creation of a traffic calmed environment via the use of 'softer' or passive measures.	4.2.1 – Building Height and Street Width 4.2.2 – Street Trees 4.2.3 – Active Street Edges 4.2.4 – Signage and Line Marking 4.2.7 – Planting 4.4.2 – Carriageway Surfaces 4.4.9 - On-Street Parking Advice Note 1 – Transitions and Gateways	Yes	No action required	No Action
3.3.3	A suitable range of design standards/measures have been applied that are consistent with the applied design speeds.	4.4.1 - Carriageway Widths 4.4.4 – Forward Visibility 4.4.5 – Visibility Splays 4.4.6 – Alignment and curvature 4.4.7 – Horizontal and Vertical Deflections Advice Note 1 – Transitions and Gateways	Yes	No action required	No Action

3.4 Pedestrian and Cycling Environment

Pedestrian and Cycling Environment					
Ref	Key Issues	Key DMURS Reference	Conforms	Street Design Audit Comment	Action
3.4.1	The built environment contributes to the creation of a safe and comfortable pedestrian environment.	4.2.1 – Building Height and Street Width 4.2.3 – Active Street Edges 4.2.5 – Street Furniture 4.4.9 - On-Street parking	No	There are sections of the existing footpaths within Blessington where there are obstructions along the route.	Ensure pedestrians are provided with an obstruction free route.
3.4.2	Junctions been designed to ensure the needs of pedestrians and cyclists are prioritised.	4.3.2 – Pedestrian Crossings 4.3.3 – Corner Radii 4.4.3 – Junction Design 4.4.7 – Horizontal and Vertical Deflections	Unknown	Crossing details have not provided to the audit team.	Ensure appropriate crossing facilities and appropriate tactile paving is provided along the route. .
3.4.3	Footpaths are continuous and wide enough to cater for the anticipated number of pedestrian movements.	3.2.1 – Movement Function. 3.2.2 – Place Context. 4.2.5 – Street Furniture 4.3.1 - Footways, Verges and Strips 4.3.2 - Pedestrian Crossings	No	There are sections of the footpaths where there are obstructions, and sections of narrow footpaths along the route.	Ensure all footpaths are wide enough to cater for pedestrian movements, DMURS recommends a minimum footpath width of 1.8m
3.4.4	The particular needs of visually and mobility impaired users been identified and incorporated in the design.	4.2.5 - Street Furniture 4.3.1 - Footways, Verges and Strips 4.2.5 - Street Furniture 4.3.2 - Pedestrian Crossings 4.3.4 - Pedestrianised and Shared Surfaces	No	The details of provision of facilities for visually and mobility impaired have not been provided.	Provision of facilities for visually and mobility impaired should be provided.
3.4.5	Cycling facilities will cater for cyclists of all ages and abilities.	3.2.1 – Movement Function. 3.2.3 – Place Context. 4.3.5 - Cycle facilities.	Unknown	Details have not provided to the audit team.	Ensure cyclist are catered along the route, and stations are available and appropriate signage and line markings for cyclists should be provided.

3.5 Visual Quality

Visual Quality					
Ref	Key Issues	Key DMURS Reference	Conforms	Street Design Audit Comment	Action
3.5.1	The landscape plan responds to the street hierarchy and the value of the place.	3.2.1 – Movement Function. 3.2.2 – Place Context. 4.2.2 – Street Trees 4.2.7 – Planting Advice Note 1 – Transitions and Gateways	Yes	No action required	No Action
3.5.2	Street furniture is orderly placed.	3.2.1 – Movement Function. 3.2.3 – Place Context. 4.2.5 - Street Furniture. 4.3.1 Footways, Verges and Strips	No	There are sections of the existing footpaths within Blessington where there are obstructions along the route.	Ensure pedestrians are provided with an obstruction free route.
3.5.3	The use of signage and line marking has been minimised.	3.2.1 – Movement Function. 3.2.3 – Place Context. 4.2.4 - Signage and Line Marking.	Unknown	The full extent of the proposed signage and line marking has not been provided	Provision of signage and line marking should be provided at the Detailed Design Stage and in accordance with DMURS and the Traffic Signs Manual.
3.5.4	Materials and finishes used throughout the scheme have been selected from a limited palette and respond to the value of the place?	3.2.1 – Movement Function. 3.2.3 – Place Context. 4.2.6 – Materials and Finishes 4.2.8 – Historic Contexts. 4.3.2 – Pedestrian Crossings 4.4.2 – Carriageway Surfaces Advice Note 2 – Materials and Specifications	Unknown	Details of surfacing materials have not been provided.	Ensure appropriate surfacing materials are provided along the differing sections of the route.

4. Access Audit

4.1 Overview

An Access Audit identifies a range of barriers that potentially restricts access for mobility impaired road users in the external built environments.

For the purpose of the Access Audit assessment, the environment's features have been broken down into its constituent features. Each feature is assessed for conformity against certain access criteria. These criteria are derived from the following range of Best Practice sources, guidelines, standards, publications and legislation:

- The Disability Act 2005 and related Sectoral Plans;
- Building Regulations 2000, Technical Guidance Document M – Access for People with Disabilities (Department of the Environment, Heritage and Local Government);
- Buildings for Everyone – Access and use for all citizens (National Disability Authority);
- Access to the Historic Environment – Meeting the needs of Disabled People (Lisa Foster);
- Traffic Management Guidelines (Irish Government Publications 2003);
- Design Manual for Urban Road and Streets (Department of Transport, Tourism and Sport);
- Access Auditing of the Built Environment guidelines (National Disability Authority);
- British Standards Institute BS8300:2001 and BS5588;
- Inclusive Mobility – A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure (Department of Transport United Kingdom); and
- Guidance on the use of Tactile Paving Surfaces: UK Department for Transport.

Where a site feature does not conform to this guidance, an explanation as to the potential restriction on access is provided, together with a suggested action and the priority in which such actions should be undertaken.

The Disability Act 2005 and the National Disability Authority's initiatives build on relationships and practices which currently exist among councils, city planners, building professionals and community groups to make services in Ireland more accessible to people with mobility impairments.

In addition to people who use wheelchairs or have restricted mobility, there are many people affected by some degree of hearing loss, visual impairment or conditions such as arthritis. This access assessment considers the needs of all potential users from a universal access perspective.

The audit is an organisation's first step in identifying physical barriers that mobility impairment road users may encounter when engaging with the community, public services and facilities.

The Access Audit has considered the following in particular:

- Paths and Pavements in Streets, Roads and Public Areas;
- Uncontrolled Pedestrian Crossings;
- Controlled Pedestrian Crossings; and
- Accessible Parking Spaces.

4.2 Paths and Pavements in Streets, Roads and Public Areas

Streets, roadways and access for vehicle routes should have a footway/pedestrian route provided for the safety of pedestrians particularly in cities, built-up urban areas, developed towns and village environments. The following access routes were identified as having footways or pedestrian paved areas:

- Blessington.
- Baltyboys.
- Tulfarris.
- Valleymount.

- Ballyknockan.
- Lackan.

Ref	Feature	Conforms	Access Audit Comment	Action
4.2.1	Are the footways and paving a minimum of width of 1500mm? DMURS would suggest that 1800mm is the minimum space for two people to pass each other comfortably (1800 to 2000mm minimum width in High Volume Pedestrian areas)	Unknown	Details have not provided to the audit team.	Design team to ensure all footways are a minimum of 1800mm in width.
4.2.2	Is the main footway route clear of hazards that would impede wheelchair access or be a trip hazard to visually impaired pedestrians?	No	There is section along the route in Blessington that have obstructions along the route.	Ensure pedestrians are provided with an obstruction free route.
4.2.3	Are pavement surfaces free of excessive joints or cracks that would impede wheelchair access or be a potential trip hazard to visually impaired pedestrians?	Unknown	Further information to be provided by design team at detailed design stage.	Ensure pedestrians are provided with an obstruction free route.
4.2.4	Is the main footway route clear of obstructions mounted more than 300mm above the ground and jutting out into the access route by more than 100mm?	No	There are sections of the existing footpaths within Blessington where there are obstructions along the route.	Ensure pedestrians are provided with an obstruction free route.
4.2.5	Is the footway route clear of abrupt changes in level with cross falls or adverse cambers being more than 1:40 (2.5%)?	Unknown	Details have not provided to the audit team.	Ensure pedestrians are provided with appropriate gradients along the route.
4.2.6	Is the footway route clear of physical obstructions or windows, doors and gates that open onto the access route which present a potential hazard?	Yes	No action required	None
4.2.7	Is the main pavement route clear of loose gravel, stones and poor surface conditions that would impede access for wheelchair users or mobility-impaired pedestrians?	Unknown	Further information to be provided by design team at detailed design stage.	Ensure pedestrians are provided with an obstruction free route.
4.2.8	Are the footway and pedestrian routes free of headroom hazards less than 2300mm height clearance (absolute minimum 2100mm) above ground level? (e.g.: signs, lighting, hanging planters or traders' goods)	Unknown	Details have not been provided to the audit team.	Design team to check for clearances from hazards.
4.2.9	Is the access route free from any trip, slip or stumble hazards for visually impaired or blind pedestrians?	Unknown	Further information to be provided by design team at detailed design stage.	Ensure pedestrians are provided with an obstruction free route.
4.2.10	Is the paving and footway route free of temporary building works, hoardings,	Yes	No action required	None

	construction works or roads and pavement maintenance hazards?			
4.2.11	The footway route should be free of overgrown tree branches, hedges and vegetation giving clear headroom of 2300mm and not encroaching from the side?	Unknown	Details have not been provided to the audit team.	Design team to check for clearances from hazards.
4.2.12	Cycle Track or Cycle Lanes provided where shared or immediately adjacent to the dedicated footway or paving area for pedestrians	Yes	No action required	No Action
4.2.13	Is the street and pedestrian movement environment or public areas adequately covered for lighting at night?	No	Outside of the urban areas, there is no public lighting.	Ensure lighting is provided where required along the route.

4.3 Uncontrolled Pedestrian Crossings

Uncontrolled crossings include less formal types such as courtesy crossings and/or those identified by a dropped kerb.

There are uncontrolled crossings along Kilbride Road, Troopersfield, Access Roads to the Car Parking Areas, R758 and N81.

Ref	Feature	Conforms	Access Audit Comment	Action
4.3.1	Does the Uncontrolled Crossing and dished kerbs have an unobstructed width of 1200mm?	Unknown	Details have not been provided to the audit team.	Design team to ensure that dished kerbs are provided in accordance with standards.
4.3.2	Are the kerbs to the crossing reduced or lowered to form a dished kerb of maximum approach gradient of 1:12 and free of edge lips in excess of 6mm?	Unknown	Details have not been provided to the audit team.	Design team to ensure that dropped kerbs are provided in accordance with standards.
4.3.3	Is there a clear radius of at least 1800mm in which to circulate (i.e. the turning circle) at the junctions of the crossing with both footways on either side?	Unknown	Details have not been provided to the audit team.	Design team to ensure that there is clear radius of 1800mm is provided at crossings.
4.3.4	Are the footway approaches to the crossing free from obstructions including posts, signs, utilities boxes, litter bins, etc?	No	There are sections within Blessington that have obstructions along the route.	Ensure footway approaches to crossings are free from obstructions.
4.3.5	Are the footway approaches to the crossing provided with Tactile Blistered paving, yellow, fawn or buff coloured and to a minimum approach depth of 800mm (1200mm for inline crossings) from the kerb edge?	Unknown	Details have not been provided to the audit team.	Appropriate facilities for visually and mobility impaired should be provided.
4.3.6	Is the crossing free of gratings, drains and culverts that would cause hazards to	Unknown	Details have not been provided to the audit team.	Ensure that the location of gratings, drains and culverts are outside of the

	mobility impaired pedestrians or wheelchair users?			pedestrian crossing locations.
4.3.7	Is the main pavement route clear of loose gravel, stones and poor surface conditions that would impede access for wheelchair users or mobility-impaired pedestrians?	Unknown	Further information to be provided by design team at detailed design stage.	
4.3.8	Are the footway and pedestrian routes free of headroom hazards less than 2300mm height clearance (absolute minimum 2100mm) above ground level? (e.g.: signs, lighting, hanging planters or traders' goods)	Unknown	Details have not been provided to the audit team.	Design team to check for clearances from hazards.

4.4 Controlled Pedestrian Crossings

Controlled crossings provide signal-controlled protection for pedestrians and cyclists and/or those identified by the traffic control.

There are controlled crossings on Main Street, Blessington, along Blessington Bridge and N81.

Ref	Feature	Conforms	Access Audit Comment	Action
4.4.1	Does the controlled Crossing and dished kerbs have an unobstructed width of 1200mm?	Unknown	Details have not been provided to the audit team.	Design team to ensure that dished kerbs are provided in accordance with standards.
4.4.2	Are the kerbs to the crossing reduced or lowered to form a dished kerb of maximum approach gradient of 1:12 and free of edge lips in excess of 6mm?	Unknown	Details have not been provided to the audit team.	Design team to ensure that dropped kerbs are provided in accordance with standards.
4.4.3	Is there a clear radius of at least 1800mm in which to circulate (i.e. the turning circle) at the junctions of the crossing with both footways on either side?	Unknown	Details have not been provided to the audit team.	Design team to ensure that there is clear radius of 1800mm is provided at crossings.
4.4.4	Are the footway approaches to the crossing free from obstructions including posts, signs, utilities boxes, litter bins, etc?	No	There are sections with Blessington a that have obstructions along the route.	Ensure footway approaches to crossings are free from obstructions.
4.4.5	Are the footway approaches to the crossing provided with Tactile Blistered paving, yellow, fawn or buff coloured and to a minimum approach depth of 800mm (1200mm for inline crossings) from the kerb edge?	Unknown	Details have not been provided to the audit team.	Appropriate facilities for visually and mobility impaired should be provided.
4.4.6	Is the crossing free of gratings, drains and culverts that would cause hazards to mobility impaired pedestrians or wheelchair users?	Unknown	Details have not been provided to the audit team.	Ensure that the location of gratings, drains and culverts are outside of the pedestrian crossing locations.

4.4.7	Is the main pavement route clear of loose gravel, stones and poor surface conditions that would impede access for wheelchair users or mobility-impaired pedestrians?	Unknown	Further information to be provided by design team at detailed design stage.	
4.4.8	Are the footway and pedestrian routes free of headroom hazards less than 2300mm height clearance (absolute minimum 2100mm) above ground level? (e.g.: signs, lighting, hanging planters or traders' goods)	Unknown	Details have not been provided to the audit team.	Design team to check for clearances from hazards.

4.5 Accessible Parking Spaces

Within a parking scheme it is important to provide designated Accessible Parking Spaces to serve the needs of mobility impaired drivers or passengers.

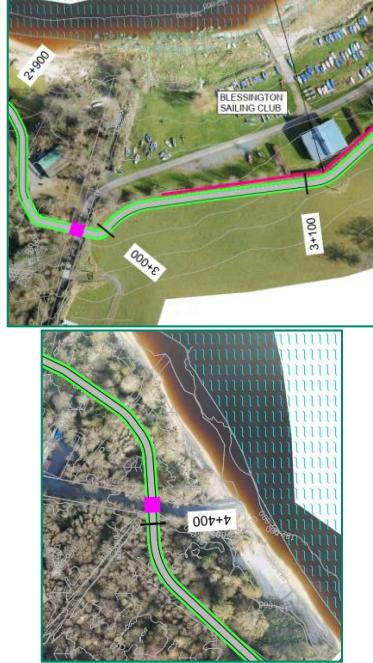
Proximity of Accessible Parking can be determined by the type and location of public services, churches, hospitals, shopping and/or other recreational facilities adjacent to the street environment.

Accessible Parking Spaces have been identified within the area of the Audit:

Ref	Feature	Conforms	Access Audit Comment	Action
4.5.1	Are dedicated parking spaces provided at a convenient location to the development entrance(s).	Unknown	Details have not been provided to the audit team.	Design team to ensure that accessible parking is provided at car park access locations along the route.
4.5.2	Are dedicated parking spaces provided at with a clearly marked 1.4m symbol on the road surface to show parking assigned to disabled or mobility-impaired drivers or passenger?	Unknown	Details have not been provided to the audit team.	Design team to ensure that accessible parking at car park access locations is clearly marked.
4.5.3	Is the Accessible Parking Space indicated by a sign clearly showing the position of the space?	Unknown	Details have not been provided to the audit team.	Design team to ensure that accessible parking signage is provided in accordance with standards.
4.5.4	Is there a 1000mm wide Dished or Dropped Kerb edge lowered to allow good access for wheelchair users from the parking space to the pavement or access route with flush or max 6mm upstand and 1:12 max gradient?	Unknown	Details have not been provided to the audit team.	Design team to ensure that dropped kerbs are provided in accordance with standards.
4.5.5	Is there Cross-Hatching provided on the road surface to indicate a clear route for wheelchair users entering the paved routes?	Unknown	Details have not been provided to the audit team.	Design team to ensure that appropriate cross-hatching is provided where required.

5. Cycling Audit

5.1 Summary of Issues from this Cycling Audit

5.1.1. Problem	
<i>Location:</i> Road Crossing (Scheme Wide)	
<i>Drawings:</i> 60617025_SHT_DD_BLGKY_142 series	
<i>Summary:</i> Provision of road crossings for cyclists	
Description:	
On the scheme there are a few proposed road crossing points, where the proposed route will cross an existing road such as the R758, Access Road to Blessington Sailing Club, Valleymount Road. It is unclear to the audit team what arrangements will be provided for the road crossing at these locations. The lack of the safe crossing arrangements can lead cyclists to enter into traffic, this can cause a cyclist/vehicle collision.	
Recommendation:	
Provide appropriate crossing points on all road crossing points.	

5.1.2. Problem	
<i>Location:</i> Connection onto Kilbridge Road	
<i>Drawing:</i> 60617025_SHT_DD_BLGKY_142- Blessington Sheet 2 of 11	
<i>Summary:</i> Lack of crossing provisions	
Description:	
The existing connection between the access road and the Kilbridge Road has no provisions for NMUs crossing. No road crossing provisions are proposed along the Kilbridge Road for non-motorised users. The lack of appropriate crossing facilities can lead to shared footpath user crossing at undesignated location, which could result in a cyclist/vehicle collision.	

Recommendation:
Appropriate crossing facilities for cyclists should be provided at all road crossings

5.1.3. Problem	
<i>Location:</i> Kilbride Road	
<i>Drawing:</i> 60617025_SHT_DD_BLGKY_142-Blessington Sheet 2 of 11	
<i>Summary:</i> Narrow Footpath in Kilbride Road	
Description:	
The existing footpath on the Kilbride Road, on the southern section of the road is quite narrow at approximate chainage 0+800m. As this section is shared use, the narrow footpath may present a difficulty for cyclists when the footpath is busy. This may lead to cyclists entering onto the carriageway, which can lead to cyclist/vehicle collisions.	
Recommendation:	
Appropriate footpath width should be provided to accommodate all shared footpath users.	

5.1.4. Problem	
<i>Location:</i> Blessington Bridge; Baltyboys Bridge & Valleymount Bridge	
<i>Drawings:</i> 60617025_SHT_DD_BLGKY_142 Baltyboys Sheet 8 of 8 and Lackan Sheet 9 of 9	
<i>Summary:</i> Narrow Footpaths	
Description:	
The Blessington, Baltyboys, and Valleymount Bridges will be a connection between proposed sections of the Greenway. As a single carriage way with a narrow footpath on the southern side of the road, it is unclear if there will be enough width for the cyclist and pedestrian to safely use these facilities to pass one another. The narrow footpath may lead to cyclists entering onto the carriageway to pass opposing pedestrians/cyclists, which can lead to a cyclist/vehicle collision.	
Recommendation:	
Provide appropriate facilities to ensure pedestrians and cyclists can pass safely.	

5.2 Possible Conflicts with Other Audits / Project Objectives

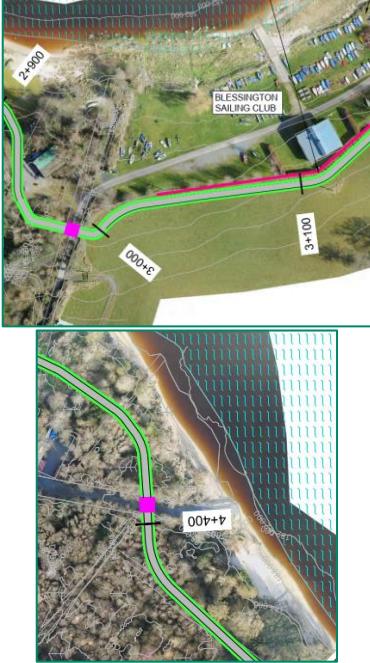
No possible conflicts with other audits or project objectives.

5.3 Conclusions / Recommendations

Ensure that the recommendations outlined in 5.1.1 to 5.1.4 are addressed.

6. Walking Audit

6.1 Summary of Issues from this Walking Audit

6.1.1. Problem	
Location: Road Crossing (Scheme Wide)	
Drawings: 60617025_SHT_DD_BLGKY_142 series	
Summary: Provision of road crossings for pedestrians	
Description:	
On the scheme there are a few proposed road crossing points, where the proposed route will cross an existing road such as the R758, Access Road to Blessington Sailing Club, Valleymount Road. It is unclear to the audit team what arrangements will be provided for the road crossing at these locations. The lack of the safe crossing arrangements can lead pedestrians to enter into traffic, this can cause a pedestrian/vehicle collision.	
Recommendation:	
Provide appropriate crossing points on all road crossing points.	

6.1.2. Problem	
Location: Connection onto Kilbride Road	
Drawing: 60617025_SHT_DD_BLGKY_142- Blessington Sheet 2 of 11	
Summary: Lack of crossing provisions	
Description:	
The existing connection between the access road and the Kilbride Road has no provisions for pedestrians crossing. No road crossing provisions are proposed along the Kilbride Road for non-motorised users. The lack of appropriate crossing facilities can lead to shared footpath user crossing at undesignated location, which could result in a pedestrian/vehicle collision.	

Recommendation:
Appropriate pedestrian crossing facilities should be provided at all road crossings

6.1.3. Problem	
<i>Location:</i> Kilbride Road	
<i>Drawing:</i> 60617025_SHT_DD_BLGKY_142-Blessington Sheet 2 of 11	
<i>Summary:</i> Narrow Footpath in Kilbride Road	
Description:	
The existing footpath on the Kilbride Road, on the southern section of the road is quite narrow at approximate chainage 0+800m. As this section is shared use, the narrow footpath will present a difficulty for some pedestrians if cyclists are utilising this shared space. This may lead to pedestrians entering onto the carriageway, which can lead to pedestrian/vehicle collisions.	
Recommendation:	
Appropriate footpath width should be provided to accommodate all shared footpath users.	

6.1.4. Problem	
<i>Location:</i> Kilbride Road	
<i>Drawing:</i> 60617025_SHT_DD_BLGKY_142-Blessington Sheet 2 of 11	
<i>Summary:</i> Street lighting pole restricts footpath width	
Description:	
On the existing footpath on the Kilbride Road, a street lighting/electricity pole is located on the footpath at the edge of the carriageway. This pole further restricts the usable width of the narrow footpath. The obstruction of the footpath will present a difficulty for some users. This may lead to Greenway user entering onto the carriageway, which can lead to pedestrian/vehicle collisions.	
Recommendation:	
Appropriate footpath width should be provided to accommodate all shared footpath users.	

6.1.5. Problem		
Location:	Blessington Bridge; Baltyboys Bridge & Valleymount Bridge	
Drawings:	60617025_SHT_DD_BLGKY_142 Baltyboys Sheet 8 of 8 and Lackan Sheet 9 of 9	
Summary:	Narrow Footpaths	
Description:		Figure 6-5 - Narrow Footpaths on. Blessington Bridge
The Blessington, Baltyboys, and Valleymount Bridges will be a connection between proposed sections of the Greenway. As a single carriage way with a narrow footpath on the southern side of the road, it is unclear if there will be enough width for the cyclist and pedestrian to safely use these facilities to pass one another. The narrow footpath may lead to pedestrians entering onto the carriageway to pass opposing pedestrians/cyclists, which can lead to pedestrian/vehicle collision. The lack of width on the footpath to accommodate pedestrian and cyclist passing may lead to cyclist/pedestrian collisions.		
Recommendation:		
Provide appropriate facilities to ensure pedestrians and cyclists can pass safely.		

6.2 Possible Conflicts with Other Audits / Project Objectives

No possible conflicts with other audits or project objectives.

6.3 Conclusions / Recommendations

Ensure that the recommendations outlined in 6.1.1 to 6.1.5 are addressed.

7. Stage 1 Road Safety Audit

7.1 Overview

This Safety Audit has reported on issues relating to the proposed scheme. This is classified as a Stage 1 Road Safety Audit, as defined within the TII Road Safety Audit Guidelines.

7.2 Road Geometry

7.2.1. Problem	
<i>Location:</i> Burgage Moyle Road – Chainage 5+000	
<i>Drawing:</i> 60617025_SHT_DD_BLGKY_142-Blessington Sheet 6 of 11	
<i>Summary:</i> Unsuitable road surface	
Description:	
During site inspection it was observed that the local road, Burgage Moyle Road, is potholed and extremely uneven which is unsuitable for many forms of cycles. As Greenway users will be directed to use this road as a connection link, the lack of proper road surface may lead to cyclists avoiding this road and bypassing this section by travelling on the section of N81, where there is no footpath provision, to link back into the Greenway. This can lead to cyclists cycling on the national secondary road where the posted speed limit is 100km/h which could result in cycle/vehicle collisions.	
Recommendation:	
Upgrade the surface of the Burgage Moyle Road to a standard to accommodate all non-motorised users.	

7.2.2. Problem	
<i>Location:</i> Blessington Bridge	
<i>Drawing:</i> 60617025_SHT_DD_BLGKY_142-Blessington Sheet 1 of 11	
<i>Summary:</i> Steep slope for Greenway users on the approach to the Blessington Bridge	
Description:	
The approach to the Blessington Bridge will connect to the footpath on the eastern side of the Blessington Bridge. During the site inspection it was observed that the slope on the approach to the abutment of the bridge would be quite steep. The Blessington Bridge Road is elevated above adjacent ground level at this location. There is no footpath or verge provision on the western side of the Blessington Bridge Road to facilitate NMUs. As the Greenway will rise to connect to the bridge, it is unclear to the auditors if there is sufficient visibility to Greenway users from vehicles travelling on the carriageway.	
Recommendation:	
Appropriate gradient levels on the approach to the Blessington Bridge Road should be provided, as well as appropriate signage and visibility requirements at the connection location.	

7.2.3. Problem	
Location: Baltyboys Section connection to the Tulfarris Loop	
Drawing: 60617025_SHT_DD_BLGKY_142 Baltyboys Sheet 8 of 8	
Summary: Restricted visibility to crossing connection	
Description:	
The connection between the Baltyboys and the Tulfarris schemes is proposed at the junction of the R758 and the local L8360 road. The R758 is posted as an 80km/h speed limit but vehicle speeds at this location. High through speeds on the R758 at this location might lead to vehicle users not observing cyclists crossing at this location which may result in the vehicle unable to stop in time and can lead to NMU/vehicular collisions.	
Recommendation:	
Ensure sufficient forward visibility and signage is provided on the R758 and L8360 road to indicate the presence of the cycle access and potential for NMUs crossing the R758.	

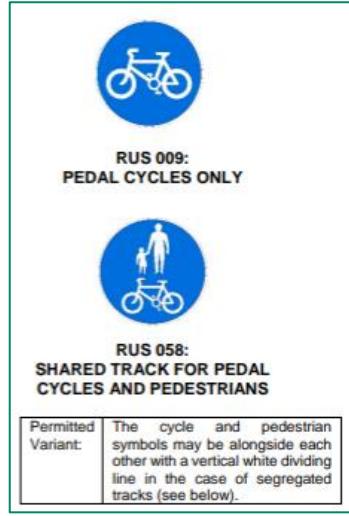
7.2.4. Problem	
Location: Southern End of the Baltyboys Greenway section	
Drawing: 60617025_SHT_DD_BLGKY_142 Baltyboys Sheet 8 of 8	
Summary: Steep slope for Greenway users on the approach to the Bridge	
Description:	
The southern end of the Baltyboys section will connect to the western side of the Valleymount Bridge and carpark. The Greenway connects directly to the R758. The R758 is elevated above adjacent ground level at this location, and it was observed that the embankment slopes are steep. There is no footpath or verge provision on the Valleymount Bridge to facilitate NMUs. As the Greenway will rise to connect to the R758, west of the bridge, it is unclear to the auditors if there is sufficient visibility to vehicles travelling on the R758.	
Recommendation:	
Appropriate Greenway gradient on the approach to the R758 should be provided, as well as appropriate signage and visibility requirements at the connection location.	

7.2.5. Problem		
Location: Southern End of the Baltyboys Greenway section		
Drawing: 60617025_SHT_DD_BLGWY_142 Baltyboys Sheet 8 of 8		
Summary: Proposed Greenway access to the carpark		
Description:		
<p>At the southern end of the Baltyboys section, the Valleymount Bridge will serve as a connection link between the Baltyboys and the Valleymount sections. The Baltyboys section of the greenway terminates at the R758. as per the proposed arrangement, there will be 2 accesses to the carpark, the existing one on the western side of the carpark for vehicles, and the proposed Greenway access further east on approach to the bridge.</p> <p>After passing the carpark entrance a driver travelling eastbound may not expect a second access connection to the road ahead. If insufficient forward visibility or warning signage is not provided to R758 users approaching the Greenway, this can lead to cyclist/vehicle collisions.</p>		
Recommendation:		
<p>Provide appropriate visibility and warning signage for vehicles on the R758 to the Greenway access or combine the access points to provide a single point of access with adequate forward visibility in both directions.</p>		

7.2.6. Problem		
Location: Tulfarris Hotel & Golf Resort		
Drawing: 60617025_SHT_DD_BLGWY_142.4 Tulfarris Sheet 4 of 4		
Summary: Crossing private lands		
Description:		
<p>It is indicated that the proposed Greenway is to cross diagonally through the maintenance yard of the Tulfarris Hotel & Golf Resort. It is unclear to the auditors how this arrangement will be formed. There is the potential for interaction with agricultural and maintenance vehicles through this yard which could lead to non-motorised user collisions.</p> <p>The connection between the offline section to the on-road section of the loop, will connect at the Tulfarris House Hotel, the offline section is proposed to cross the existing maintenance vehicles access road, on chainage 2+400. As this road will be mainly used by maintenance vehicles the crossing at this point will be unexpected by drivers, which might cause cyclist collision.</p>		
Recommendation:		
<p>Revise the route through this yard to minimise the crossing distance and provide defined access locations or relocate the Greenway route around the maintenance yard.</p>		

<p>7.2.7. Problem</p> <p>Location: Blessington Bridge</p> <p>Drawing: 60617025_SHT_DD_BLGwy_142 Lackan Sheet 9 of 9</p> <p>Summary: Visibility between the proposed Greenway and Blessington Bridge</p> <p>Description:</p>	
<p>The greenway travels offline close to the waters edge for most of the Lackan section, reconnecting with the public road network on the north-eastern side of Blessington Bridge via the Blessington Rowing Club Car Park. As the Greenway rises to connect to the public road, the visibility to and from the Greenway may be impaired by the existing fence line. This can result in vehicles not seeing emerging Greenway users and lead to cyclist/pedestrian collision.</p> <p>Recommendation:</p> <p>Appropriate signage and visibilities requirements should be provided at the Greenway access point to ensure safe egress onto the public road.</p>	

7.3 Signing and Lining

<p>7.3.1. Problem</p> <p>Location: Scheme wide</p> <p>Drawings: 60617025_SHT_DD_BLGwy_142 series</p> <p>Summary: Shared use Signage</p> <p>Description:</p>	
<p>There is a lack of proposed signage indicated along the route and at the linkage connection points to indicate to either drivers, pedestrians, or cyclists the presence of the shared Greenway. The lack of the appropriate signage on the route will not inform the users of the shared area, which might cause confusion and lead to pedestrian and cyclist collisions.</p>	
<p>Recommendation:</p> <p>Provide appropriate shared use signage on all proposed linkages to existing facilities, to indicate the shared and segregated pedestrian and cycle facilities on approach to / from the Greenway.</p>	

7.3.2. Problem	
<i>Location:</i> Main Street	
<i>Drawing:</i> 60617025_SHT_DD_BLGKY_142-Blessington Sheet 2 of 11	
<i>Summary:</i> Vehicular Access locations across footpath	
Description:	
Along Main Street it is proposed to have a two-way cycle lane, on the eastern section of the road. On this section of road there is car parking provision and vehicular accesses crossing the existing footpath. The proposal does not show provisions to maintain these vehicular accesses. The lack of proper delineation of the vehicular entrance can lead to cyclists being unaware of the potential access manoeuvres into and from these access points, which can lead to cyclist/vehicle collisions.	
Recommendation:	
Ensure appropriate provision for all vehicular accesses across the cycle lane including kerbing and line markings.	

7.3.3. Problem	
<i>Location:</i> Main Street - Blessington Family GP Practice	
<i>Drawing:</i> 60617025_SHT_DD_BLGKY_142-Blessington Sheet 2 of 11	
<i>Summary:</i> Removal of Ambulance Parking Space	
Description:	
Along the Main Street it is proposed to have a two-way cycle way, on the eastern section of the road. Currently, there is a designated parking space for ambulances in front of the Family Practice GP and Doctors Clinic. the current proposal does not show any provisions to maintain this authorised parking space.	
The lack of proper delineation of the parking area for the ambulance will lead to an ambulance stopping in the cycle lane or on the carriageway which could cause confusion to cyclists who will be unaware of the possibility of a vehicle pulling into the cycle lane or ambulance users crossing the cycle lane at this location, which may lead to cyclist collision.	
Recommendation:	
Provide appropriate parking provision for the ambulance parking bay.	

7.4 Pedestrian and Cyclist

7.4.1. Problem	
<i>Location:</i> Rockypool Villas	
<i>Drawing:</i> 60617025_SHT_DD_BLGKY_142-Blessington Sheet 2 of 11	
<i>Summary:</i> Shared space between vehicles and cyclist	
Description:	
The scheme is proposed to tie the Rockypool Villas with the Troopersfield Road via a shared space between pedestrians, cyclists and vehicles. While at the connection with Troopersfield Road a raised table is proposed, at the northern end of the Rockypool Villas road there is no additional proposal for provision of any vehicle speed reduction measures. It is unclear for the auditor how the lower speeds will be maintained in this shared area.	
Recommendation:	
Provide speed reduction measures at the accesses to Rockypool Villas.	

7.4.2. Problem	
<i>Location:</i> North of Bridge on N81 - Lake View Point and Greenway Exit on R758	
<i>Drawings:</i> 60617025_SHT_DD_BLGKY_142-Blessington Sheet 6 of 11 and Sheet 8 of 11	
<i>Summary:</i> Greenway gates restrict access	
Description:	
	
	<p>Figure 7-12 – Gates Restrict Access</p>
	<p>Figure 7-13 – Gates Restrict Access</p>

The greenway offline section will connect back onto the N81 at ch4+300 via the existing greenway and also at ch6+100 the Greenway crosses the R758. At these locations, gates are provided to restrict vehicular access. The exiting gates restrict the manoeuvres of larger bikes, such as cargo bikes or bicycles with trailers for children. This might lead to cyclists travelling on the carriageway to avoid these gates or crossing the carriageway at inappropriate locations which can cause cyclist/vehicle collisions.

Recommendation:

The existing gates should be replaced with an alternate access control which will enable access for all forms of cyclists and to restrict vehicular access.

7.4.3. Problem

Location: Russelstown Carpark

Drawing: 60617025_SHT_DD_BLGwy_142-Blessington Sheet 10 of 11

Summary: Vehicular Barriers restrict cyclists

Description:



Figure 7-14 – Barrier Restricts Access

The upgraded greenway is proposed to connect to the Russelstown Carpark. The existing route at the access into the carpark is obstructed with a barrier, which will make it difficult for cyclists to access the Greenway. This may lead to Greenway users accessing at locations which could lead to trips or falls causing personal injury.

Recommendation:

The existing barrier should be replaced with an alternate access control which will enable access for cyclist and pedestrians and restrict the vehicular access.

7.4.4. Problem

Location: N81 – Connection with Russborough House & Park

Drawing: 60617025_SHT_DD_BLGwy_142-Blessington Sheet 11 of 11

Summary: Restricted Headroom at tunnel

Description:



Figure 7-15 – Restricted Headroom at Tunnel in Russborough House & Park

The proposed greenway is to link into the Russborough House estate via a tunnel below the N81. This tunnel has a restricted headroom, which will restrict the cyclist using this crossing. This may lead to cyclists attempting to cross the N81 at unsafe locations where vehicles do not expect NMUs crossing the road, which could lead to cycle/vehicle collisions.

Recommendation:

Appropriate provision of the clear headroom space should be provided, or appropriate signage provided to direct Greenway users to alternate crossing locations or restrictions.

7.5 Drainage and Maintenance

No issues noted at this stage.

7.6 Public Lighting

7.6.1. Problem	
<i>Location:</i>	Kilbride Road
<i>Drawing:</i>	60617025_SHT_DD_BLGKY_142-Blessington Sheet 2 of 11
<i>Summary:</i>	Street lighting pole restricts footpath width
<i>Description:</i>	
Figure 7-16 – Obstruction of the Footpath	
On the existing footpath on the Kilbride Road, a street lighting/electricity pole is located on the footpath at the edge of the carriageway. This pole further restricts the usable width of the narrow footpath. The obstruction of the footpath will present a difficulty for some users. This may lead to Greenway user entering onto the carriageway, which can lead to pedestrian/vehicle collisions.	
Recommendation:	
Appropriate footpath width should be provided to accommodate all shared footpath users.	

8. Audit Team Statement

We certify that the site was visited and that this audit has been carried out in accordance with the Transport Infrastructure Ireland Road Safety Audit Guidelines GE-STY-01024-07 and Standard GE-STY-01027-02.

The Road Safety Audit has been carried out with the sole purpose of identifying any features of the design that could be removed or modified in order to improve the safety of the scheme.

No one on the audit team has been involved with the scheme design.

AUDIT TEAM LEADER: Senior Road Safety Auditor

Name: Rowan Lyons

Position: Principal Engineer

Signed: 

Organisation: AECOM

Date: 12.01.2024

Address: 9th Floor

2 Clarence Street West

Belfast

AUDIT TEAM MEMBER: Road Safety Auditor

Name: Arethusa Goedert

Position: Civil Engineer

Signed: 

Organisation: AECOM

Date: 05.01.2024

Address: Adelphi Plaza

Georges Street Upper

Dun Laoghaire

Appendix A Drawings and Documents Supplied

Document No.	Rev.	Description	Date
	P01.1	Brief	10/01/2023
Drawing No.	Rev.	Description	Date
60617025_SHT_DD_BLGKY_101.2	A	Key Plan Blessington Lake, Co. Wicklow	May 2021
60617025_SHT_DD_BLGKY_101.1	A	Key Plan Blessington Lake, Co. Wicklow	April 2021
60617025_SHT_DD_BLGKY_100.1 to _100.9	A	Site Location Plans Sheets 1-9	April 2021
60617025_SHT_DD_BLGKY_142.1 - 142.6	A	Preliminary Design Ballyknockan Sheets 1-6	April 2021
60617025_SHT_DD_BLGKY_142.1 - 142.8	A	Preliminary Design Baltyboys Sheets 1-8	April 2021
60617025_SHT_DD_BLGKY_142.1 - 142.11	A	Preliminary Design Blessington Sheets 1-11	April 2021
60617025_SHT_DD_BLGKY_142.1 - 142.9	A	Preliminary Design Lackan Sheets 1-9	April 2021
60617025_SHT_DD_BLGKY_142.1 - 142.4	A	Preliminary Design Tulfarris Sheets 1-4	April 2021
60617025_SHT_DD_BLGKY_142.1 - 142.7	A	Preliminary Design Valleymount Sheets 1-7	April 2021

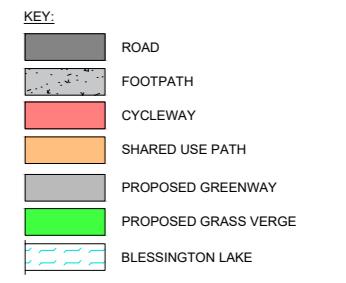
Appendix B Problem Location Map



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NOTES

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I/R	DATE	DESCRIPTION



PROJECT NUMBER

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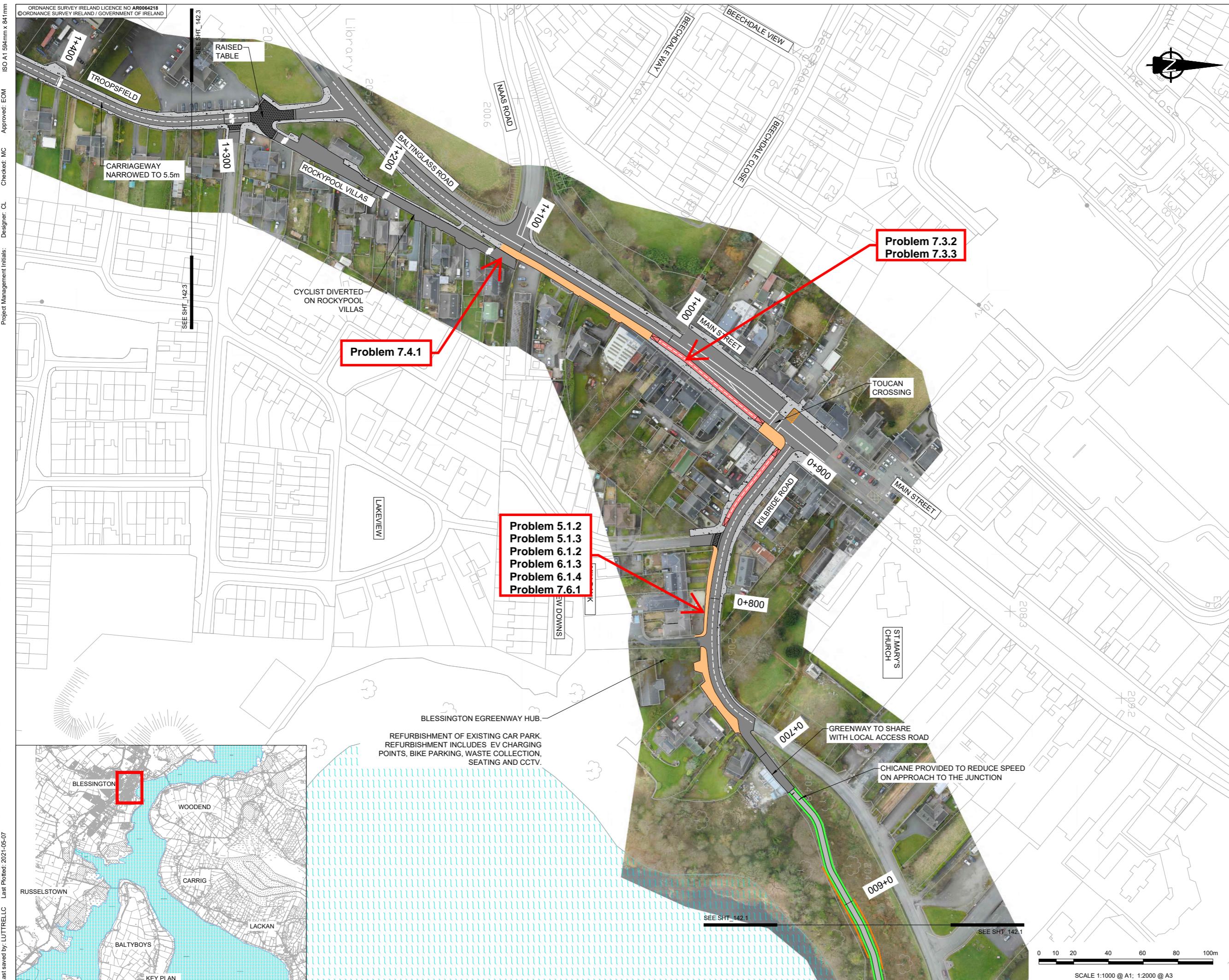
SHEET TITLE

PRELIMINARY DESIGN
BLESSINGTON
SHEET 2 OF 11

SHEET NUMBER

60617025_SHT_DD_BLGKY_142.2

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KEY:
UPGRADED GREENWAY
PROPOSED GRASS VERGE
BLESSINGTON LAKE

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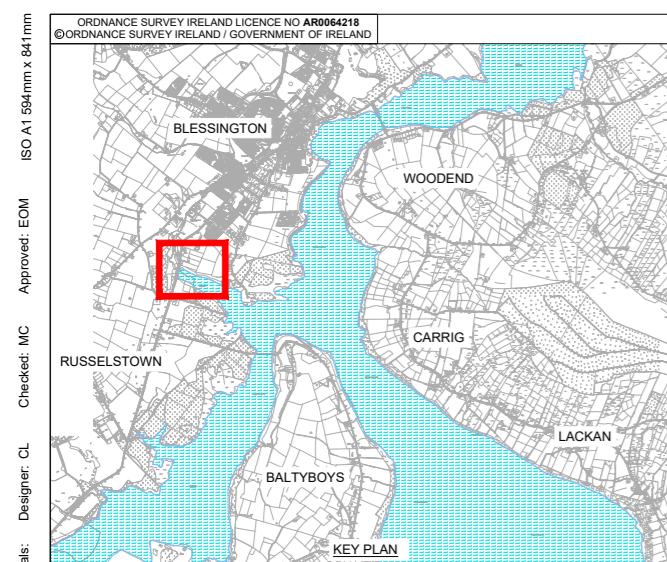
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PRELIMINARY DESIGN
BLESSINGTON
SHEET 6 OF 11

SHEET NUMBER

60617025_SHT_DD_BLGKY_142.6

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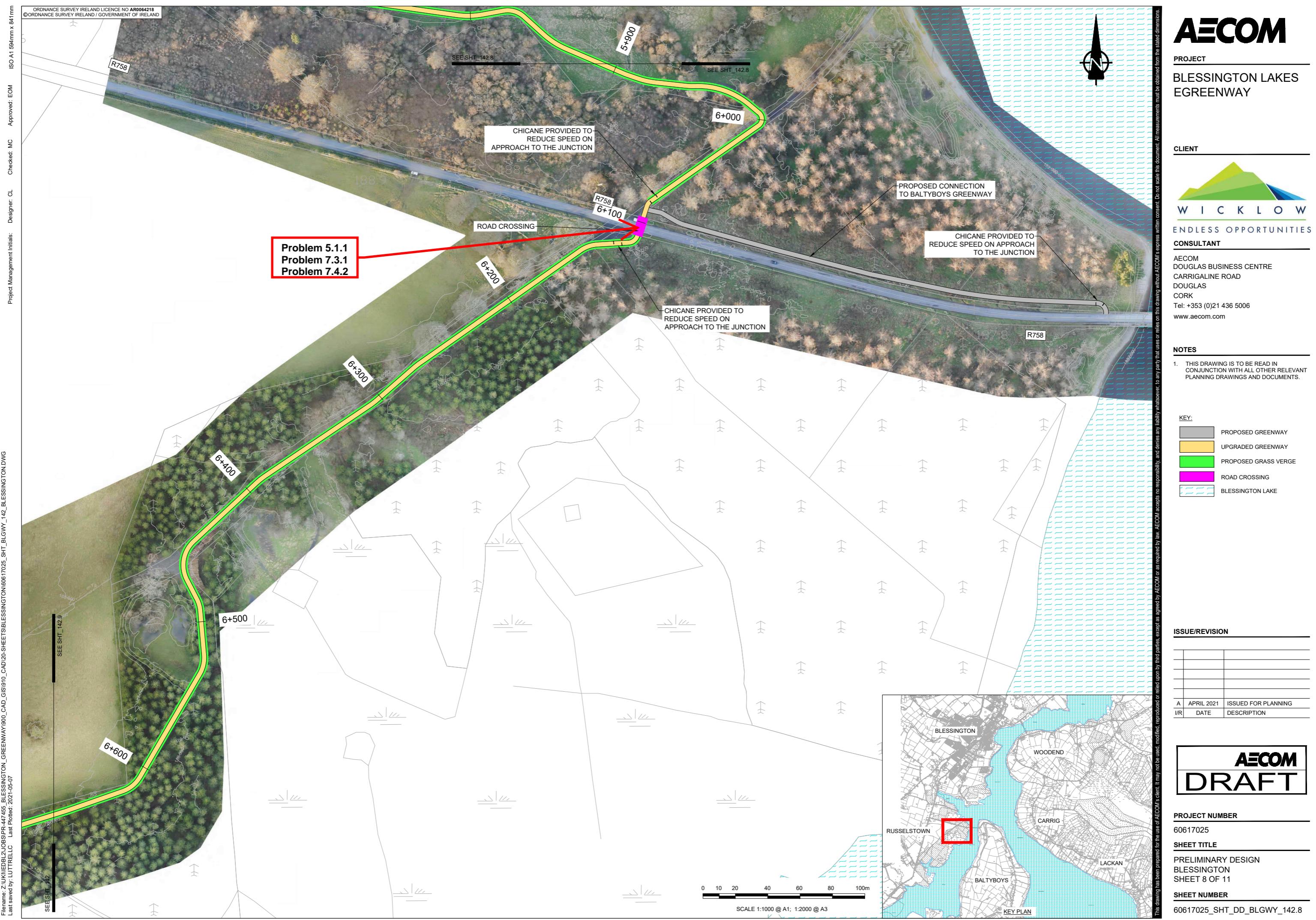
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HEFT TITEL

PRELIMINARY DESIGN
LESSINGTON
HEFT 7 OF 11

HEFT NUMBER

2017005-OUT-DR-BLOWN-148-7



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KEY:

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	UPGRADED GREENWAY
	PROPOSED GRASS VERGE
	BLESSINGTON LAKE

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SHEET TITLE

PRELIMINARY DESIGN
BLESSINGTON
SHEET 10 OF 11

SHEET NUMBER

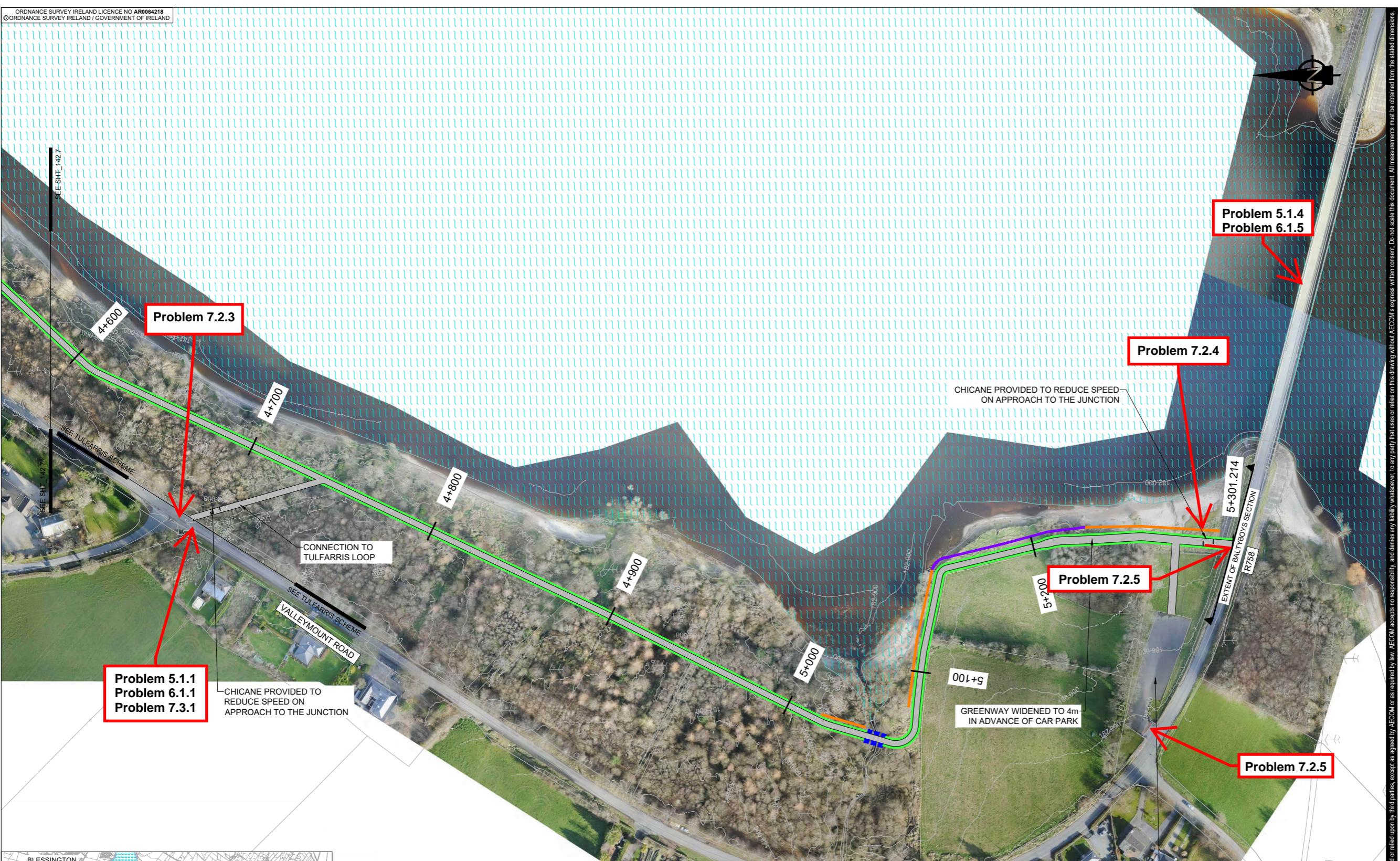
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KEY:

- PROPOSED GREENWAY
- PROPOSED GRASS VERGE
- BLESSINGTON LAKE
- PROPOSED RETAINING SOLUTION
- PROPOSED ROCK ARMOUR
- WATER CROSSING STRUCTURE

ISSUE/REVISION

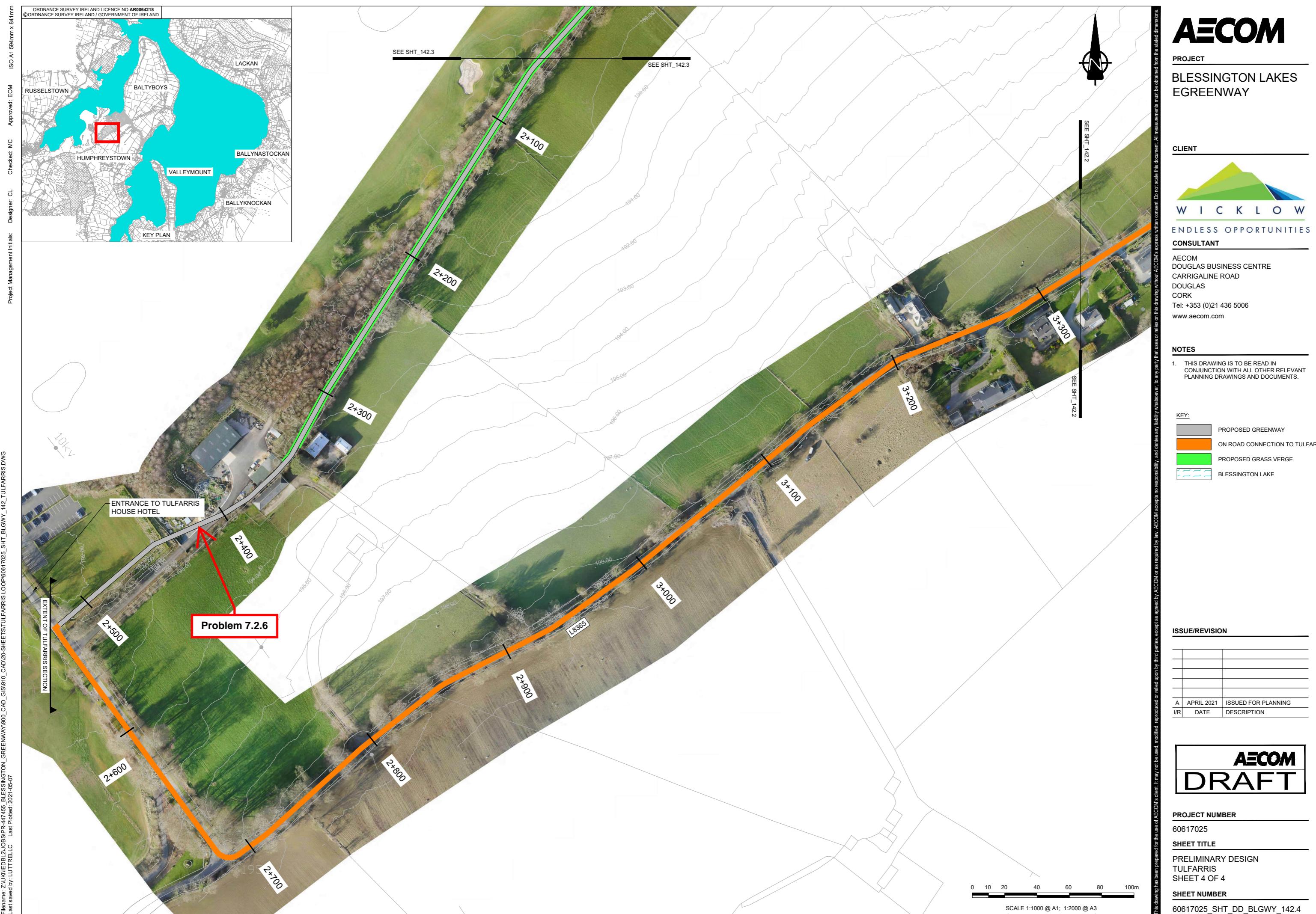
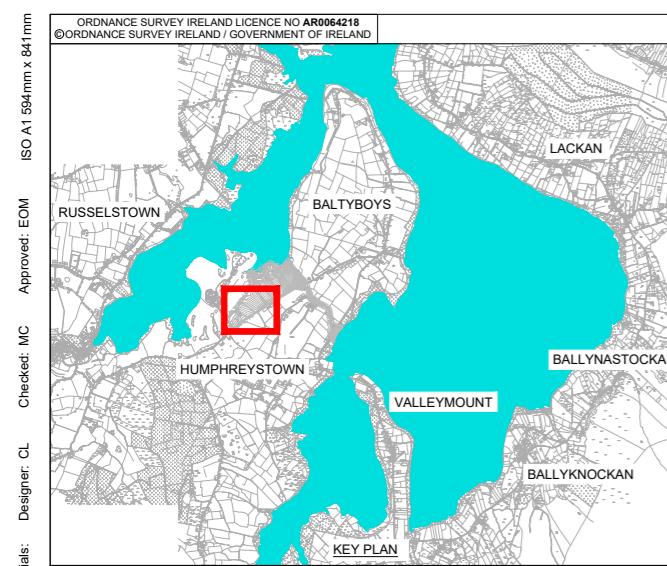
A	APRIL 2021	ISSUED FOR PLANNING
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AECOM DRAFT

PROJECT NUMBER
 60617025

SHEET TITLE
 PRELIMINARY DESIGN
 BALLYBOYS
 SHEET 8 OF 8

SHEET NUMBER
 60617025_SHT_DD_BLGWY_142.8



Appendix C Quality Audit Feedback Form

Paragraph No. in Safety Audit Report	To be Completed by Designer					To be completed by Audit Team Leader
	Problem Accepted (Yes / No)	Recommended Measure Accepted (Yes / No)	Describe Alternative Measure(s). Give reasons for not accepting recommended measure	Designer Comments	Alternative Measures or reasons accepted by auditors (Yes / No)	
5.1.1	Yes	Yes				
5.1.2	Yes	Yes				
5.1.3	Yes	Yes				
5.1.4	Yes	Yes				
6.1.1	Yes	Yes				
6.1.2	Yes	Yes				
6.1.3	Yes	Yes				
6.1.4	Yes	Yes				
6.1.5	Yes	Yes				
7.2.1	Yes	Yes				
7.2.2	Yes	Yes				
7.2.3	Yes	Yes				
7.2.4	Yes	Yes				
7.2.5	Yes	Yes				
7.2.6	Yes	Yes				
7.2.7	Yes	Yes				
7.3.1	Yes	Yes				
7.3.2	Yes	Yes				
7.3.3	Yes	Yes				
7.4.1	Yes	Yes				
7.4.2	Yes	Yes				
7.4.3	Yes	Yes				
7.4.4	Yes	Yes				
7.6.1	Yes	Yes				

Signed  Designer _____ P. Craig _____ Date 12/01/2024

Signed  Audit Team Leader Rowan Lyons Date 16.01.2024

Signed  Employer _____ D. O'Brien _____ Date 14/01/2024

