ENVIRONMENTAL RISK ASSESSMENT

Gerrard Place, Skelmersdale, WN8 9SU

W L Polymer Ltd

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1 Introduction

- This Environmental Risk Assessment (ERA) considers the potential and actual risks associated with the use of the site at Gerrard Place, Skelmersdale, WN8 9SU and Physical Treatment Facility. The site will allow for the for the acceptance storage and treatment of non-hazardous waste comprising predominantly plastic. Recycled product arising from the above treatment process will comprise plastic film and agglomerate which would be exported as a product for onward manufacturing; and, plastic pellet which will typically be sold domestically for re-use.
- Other wastes such as metal, paper/card labels, sorted and mixed packaging, mixed comingled and dry mixed recyclables may also be accepted at the site but only for bulking and transfer and no physical treatment.
- 1.3 All site staff should be provided with a copy of this ERA and be aware of where it is located on site.
- 1.4 All environmental risks identified in this document should be acted upon accordingly by site management to ensure all environmental risks can be appropriately managed/controlled.
- 1.5 This document primarily considers environmental risks associated with the site. This does not aim to provide detailed Health and Safety risk assessments as required separately through the necessary legislation.
- The Environmental Permit is required for the storage (keeping) prior to removal, and treatment (all types of handling/processing) of waste. Waste treatment processes to be carried out on site may include the following:
 - Plant feeding using 360° excavator.
 - Manual sorting/separation with forklift, 360° excavator, loading shovel or hand.
 - Bale breaking (by bale breaking equipment or 360° excavator)
 - Baling by using appropriate mechanical plant
 - Mechanical sorting/separation by using appropriate mechanical plant

- Crushing by using appropriate mechanical plant
- Shredding by using appropriate mechanical plant
- Agglomerating by using appropriate mechanical plant
- Wrapping
- Drying using mechanical and thermal means
- Heat treatment as part of an extrusion process (Erema processing plant)
- Washing, granulation and pelleting (by mechanical equipment)
- 1.7 Specified waste management operations include waste disposal and waste recovery operations listed Annex I and II of The Waste Framework Directive 2008/98/EC and are listed in summary below:
 - R3: Recycling or reclamation of organic substances.
 - R5: Recycling or reclamation of other inorganic materials.
 - R13: Storage of waste pending recovery.
- 1.8 All treatment of waste will take place inside a building.
- 1.9 Specified waste management operations include waste disposal and waste recovery operations listed Annex I and II of The Waste Framework Directive 2008/98/EC and are listed in summary below for the bulking and transfer of waste:
 - R3: Recycling or reclamation of organic substances.
 - R4: Recycling/reclamation of metals and metal compounds.
 - R5: Recycling or reclamation of other inorganic materials.
 - R13: Storage of waste pending recovery.
 - D9 Physico-chemical treatment not specified elsewhere which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D8 and D10 to D12.
 - D14 Repackaging prior to submission to any of the operations numbered D1 to 13.
 - D15 Storage pending any of the operations numbered D1 to D14 (excluding temporary storage, pending collection, on the site where it is produced).

1.10 The site will only look to wash plastic wastes to remove contamination. The plastics will then undergo further treatment to create a non-waste plastic agglomerate or plastic pellet. The agglomerate or pellet will then be exported or sold using a Packaging Recovery Note (PRN) to demonstrate the operator has recycled or recovered a portion of that packaging

2 Site Receptors

2.1 A Sensitive Receptors Plan has been provided Appendix II of this document.

2.2 <u>List of receptors</u>

2.2.1 The receptors listed from the SRP are also shown in the table below with approximate distances to these properties.

Table 2.1 – Distances to Selected, Representative Sensitive Locations

Boundary	Receptor	Approximate distance from centre of site (m)
North	Residential and small retail properties including workplaces off Wolverton	480
East	Residential and small retail properties including workplaces off Glebe Road	428
Various	Priority habitat inventory (deciduous woodland)	Adjacent – 1,000
South	M58 Motorway	30
Various	Surface waters	50 – 1,000
East	River Tawd (Main River)	850
North-west	Parkday Children's Centre	870
North-east	St Edmund's Catholic Primary School	880

2.2.2 Other receptors not shown in the above table are illustrated on Drawing No. GPL/3329/04.

3 Environmental Risk Assessment Model

3.1 Fundamental Considerations

- 3.1.1 **Source/Hazard:** A property or situation that in particular circumstances could lead to harm.
- 3.1.2 **Consequences:** The adverse effects or harm as the result of realising a hazard which causes the quality of human health or the environment to be impaired in the short or long term.
- 3.1.3 **Risk:** A combination of the probability of occurrence of a defined hazard and the magnitude of the consequences of the occurrence.

3.2 **Pathway**

- 3.2.1 Important in the assessment of a particular risk(s) and to inform the subsequent management of the risk(s) is the identification of the pathway(s) through which the risk may affect the identified receptor(s). The following are examples of pathways:
 - Air (windblown dust etc.)
 - Ground (leaching of contaminants into underlying aquifers).
 - Water (hydrocarbon run off into surface waters)
 - Direct contact / exposure

3.3 **Consequences**

3.3.1 The following table highlights the consequences of the hazard(s) identified and the abbreviations for each as used in the Risk Assessment Table in Section 3:

Abbreviation	Consequences
Α	Minor Injury
В	Major Injury
С	Death
D	Air Pollution
E	Water Pollution
F	Pollution of Land

3.4 **Effects of Consequences**

3.4.1 In order to quantify the level of risk and identify the appropriate management procedures, the potential effects must be considered, as outlined in the table below:

Abbreviation	Consequences	Management Requirements
S	SEVERE	In all cases
Мо	MODERATE	In most cases
Mi	MILD	Occasionally
N	NEGLIGIBLE	No

3.4.2 Note: "Management" is the action required to reduce the risk of a hazard causing a problem on site. Contingency measures are procedures which are in place to reduce the consequences of a hazard.

3.5 Risk Estimation and Evaluation (Probability/Frequency of Occurring Hazard)

3.5.1 The following table allows the likelihood of an occurrence of an identified risk to be assessed:

Abbreviation	Probability	Evaluation
1	Very likely	Could occur during any working day
2	Likely	Could occur regularly
3	Possible	Event possible
4	Unlikely	Event very unlikely

3.6 Risk Assessment Outcome (Combination of Probability & Consequence)

3.6.1 The following table shows the resultant risk of an identified hazard or potential situation. This uses the hierarchy of both probability and consequence to assess the level of risk. The level of risk determines what level of management would be required in order to reduce the risk of occurrence and/or scale.

		Consequence								
		S	Мо	Mi	N					
lity	1	High	High	Medium	Low					
li q	2	High	Medium	Low	Near-Zero					
robabil	3	Medium	Low	Near-Zero	N/A					
Pr	4	Low	Near-Zero	N/A	N/A					

3.6.2 Where the risk assessment outcome is high, first-level management of the risk is essential, i.e. removal of hazard, implementation of major infrastructure/structural design measures to contain the risk/hazard and company policy changes to incorporate the management of the risk. All risk management measures must be supplemented with detailed induction training, spot training and tool-box talks to ensure all site staff and users are made fully aware of the risk/hazard, all potential consequences and necessary management and contingency procedures.

- 3.6.3 Where the risk assessment outcome is medium, the management of the risk should be tackled by management or delegates. If removal of the hazard is not possible, management will normally be met through implementing minor structural design measures or by imposing procedures for the prevention of occurrences which will be conveyed to all site staff through the appropriate training, including any contingency measures/procedures.
- 3.6.4 Where the risk assessment outcome is low, the management of the risk can be done wholly through appropriate training to site staff including any contingency measures/procedures.
- 3.6.5 Where the risk assessment outcome is near-zero, site staff should be made aware of the possibility of an occurrence and contingency measures should be readily available to all staff should they be required.

4 Risk Assessment Table

- 4.1 The following pages contain the site-specific risk assessment for the site with appropriate remedial actions, recommendations and comments included for each identified hazard, potential contaminant or situation.
- 4.2 The table also contains references to the appropriate section(s) of the site's EMS for additional management procedures.
- 4.3 As discussed in Section 3.6 above, all situations which identify a risk from Low High should be incorporated into the staff/visitor training schedule, where appropriate and acted on as required.

SEE TABLES OVERLEAF

Appendix I

RISK ASSESSMENT TABLE

Hazard / Potential Contaminant or Situation	Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments
Dust / particulates	Formation of dust on site surfaces during dry and windy weather on both areas of the site. Waste delivery vehicles depositing and collecting potentially dusty waste during dry and windy weather conditions Processing waste through treatment plants Accumulation of dust/fluff on fixed and mobile plant	Air	Site personnel/ visitors Surrounding site users/occupiers Surface waters Woodland areas Tame Valley Local Wildlife Site	A, B, D, E	Mo	3	Low	All operations with the potential to create dust take place inside an industrial building. All areas with store and treat waste benefit from an impermeable concrete surface with sealed drainage system. Daily preventative maintenance checks on mobile and fixed to reduce the likelihood of fixed or mobile plant failure. A permanent water supply is available on site for suppressing mobile plant, fixed plant and site surfaces. The site is not accepting any wastes which have the potential to emit dust or carrying out any treatment activities which could give rise to dust. Site inspections by third parties have confirmed site operations do not give rise to dust. All treatment of waste will take place inside a building and plastic treating plastic packaging waste will not create dust. The only escape point of the building which is where all processing of material takes place is throughout roller shutters doors but these will always be kept closed unless a plant is accessing or egressing the building. The operator only purchases material which act as feedstock for the processing plant and as all waste is inspected on arrival, there is a negligible risk that waste would be dusty.

Hazard / Potential Contaminant or Situation	Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments
Odour	Cracks in concrete leading to trapped waste in both areas of the site Dry/hot weather conditions exceeding three dry days Prevailing wind to towards residential receptor locations Staff negligence leading to odour releases from unauthorised waste acceptance and treatment	Air	Site personnel/ visitors Surrounding site users/occupiers	A, D	Mi to Mo	3	Low	Reference should be made to the operator's Odour Management Plan [OMP (Doc. Ref. GPL-3329-G)]
Litter	Vehicles delivering / removing and waste during dry and windy weather conditions including unsheeted / poorly sheeted skips on delivery / removal vehicles Poor or faulty storage containment i.e. bays Poor housekeeping Staff negligence leading to litter escaping off site	AIR	Site personnel/ visitors Surrounding site users/occupiers Surface waters Woodland areas Tame Valley Local Wildlife Site	A to C E,F	Mi to Mo	4	Low	Reference should be made to section 4.7 of the EMS regarding litter control. All waste treatment takes place inside a building. All waste/material stored externally is in containers, storage bays or securely wrapped. Freeboard height reduced from 1m – 2m when winds reach 7 on the Beaufort Scale. If winds are higher, wastes would be transferred to containers or articulated vehicles awaiting removal off site. Use the complaint's procedure from the EMS (Section 4.10) to ensure any odour complaints are addressed and substantiated.

Hazard / Potential Contaminant or Situation	Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments
Noise/ vibration	Fixed and mobile plant and machinery breakdowns or malfunctions Operating mechanical treatment plants	Air or ground by vibration	Site personnel/ visitors Surrounding site users/occupiers Woodland areas Tame Valley Local Wildlife Site	A, D	Mo	3	Low	Reference should be made to Section 2.6 of the operator's FPP in relation to preventative maintenance checks to reduce the likelihood of fixed or mobile plant failure. The nearest sensitive receptors (NSR) are approximately 480m to the north (off Wolverton), 618m to the east (Glebe Road), 428m to the south (Moss Lane), and 970 to the west (White Moss Road). In addition to the above, the site is situated on a busy industrial estate where noise is likely to be of a similar character and level of existing surrounding land uses i.e. industrial and commercial businesses. The site is also adjacent to the M58 motorway which sits directly south of the site. Other NSRs are suitably screened by other industrial sites and buildings including Hills Salvage and Recycling Ltd (ELV and metal processing site) to the west. All waste treatment will take place inside sealed building. The building has four no. roller shutter doors, two of which are northwest facing, the NSRs facing north-west are approximately 580m away (Wheatacre). The other shutters are north and east facing, the north shutter is likely to remain closed and only open for emergency and in terms of the roller shutter to the east, the NSRs are situated over 950m away. All roller shutters would be closed other than when vehicles are accessing/egressing the building. The only noise generated outside would arise from the acceptance, storage, separation (by manual means) and movement of waste using loading shovels and forklift trucks. All waste tipped, stored outside will be done within concrete storage bays which will act as their own noise barrier. The site has been previously operated by Viridor Polymer Recycling Ltd since 2007 for a similar use and has never generated any noise complaints previously. Management will ensure that all loading plant operated is functioning suitably i.e. moving parts to be regularly lubricated. Use the complaints procedure from the EMS (Section 4.9) to ensure any noise complaints are addressed and substantiated.

Hazard / Potential Contaminant or Situation	Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments
Vermin causing leptospirosis and other respiratory diseases	Poor housekeeping Staff negligence leading to acceptance of unauthorised waste giving rise to pests Storing trade waste bins for excessive time periods. Pests arising from the acceptance and storage baled material. Non-conforming wastes within wrapped plastic	Water, direct contact with waste	Site personnel/ visitors Surrounding site users/occupiers Surface waters Woodland areas Tame Valley Local Wildlife Site	A to C	Mi to Mo	4	Near zero	Wear PPE - gloves and masks as appropriate Site inspections daily Rejected waste procedures (Section 2.8 of EMS) Strict waste acceptance procedures (Sections 3.3 & 3.4 of EMS for any baled waste material being accepted). Refer to Section 4.2 of in terms of daily inspections EMS Reference should be made to Section 4.8 of EMS with regards to pest control, however, the site does not receive any waste types which would be regarded as putrescible/ biodegradable and attract such pests. Pest controller called in the event of pests being present at the site or complaints received from receptors
Fire/ smoke / particulates	Refer to Section 2.1 of operator's FPMP	Air, direct contact	Site personnel/ visitors Surrounding site users/occupiers Surface waters Woodland areas M6 Motorway Tame Valley Local Wildlife Site	A to F	Mi to S	3	Medium	Reference should be made to the operator's FPP which references all potential fire risks from the site including mitigation to reduce the impact pollution to human health and the environment - Doc. Ref. GPL-3329-B Reference should be made to Section 2.6 of the FPP in relation to preventative maintenance checks to reduce the likelihood of fixed or mobile plant failure which is considered to be source of most fires from waste sites.

Hazard / Potential Contaminant or Situation	Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments
Vehicle collision/ accidents including impacts and injury	Poor visibility Spillages of oils/fluids causing vehicles to skid Lack of PPE worn by staff Staff negligence i.e. mobile plant operators	Direct contact	Site personnel / visitors Vehicle users Pedestrians	A to F	Mi to S	3	Low	Good housekeeping (Refer to Section 4.2 of in terms of daily inspections EMS). Fuel storage procedures shown in Section 2.7 of the EMS and stored in double bunded tanks as shown on Drawing No. GPL/3329/03. Good vehicle management and refer to Section 2.6 of the operator's FPP in relation to preventative maintenance check to reduce the likelihood of fixed or mobile plant failure. Ensure all free-standing waste storage areas are in the correct locations and access areas are kept clear as shown on Drawing No. GPL/3329/03. An accident logbook is kept in the site office so all new and existing staff members can review previous accidents. Encouragement for staff for greater number of "accident-free days" to encourage a safer working environment HSE compliant risk assessments for all site activities to identify situations which may lead to harm for site users (employees, visitors and management) Appropriate signage throughout the site. All staff have radio's and use horns / alarms on equipment to alert them of their presence The operator has trained staff who control vehicle movements throughout the site. Vehicle movements on site restricted to 5mph. Dedicated staff & visitor parking areas as shown on Drawing No. GPL/3329/03. Staff training procedures shown in Section 6 of the EMS.

Hazard / Source(s) Pat Potential Contaminant or Situation	athway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments
Staff negligence leading to acceptance of unauthorised waste giving rise to leachate Overflowing trade waste bins Defects to the concrete surfaces storing waste Non-conforming wastes within wrapped plastic		Site personnel/ visitors Surrounding site users/occupiers Surface waters Woodland areas Tame Valley Local Wildlife Site	E, F	Mi to S	3	Low	Waste storage/treatment is undertaken on an impermeable concrete surface with sealed drainage and refer to Section 4.2 of the EMS in terms of daily inspections. Strict waste acceptance procedures (Sections 3.3 & 3.4 of EMS for plastic containers and baled material) reducing the risk of wastes which could give rise to leaching properties. Section 6.5 of the EMS details staff training procedures in recognition of accepted waste types. Regular (minimum daily) checks of site surface infrastructure (as above). The site does not operate any diesel-powered mobile plant at the site, all mobile plant used to manoeuvre plastics around the site are gas powered reducing thew risk of any potential leaks or fumes occurring. Any spillages identified will be dealt with in accordance with the spillage procedures outlined in section 4.1 of the EMS. Dedicated mobile quarantine area for intercepted leachable wastes found during initial inspections ensuring isolation and quick removal off site; see Section 2.8 of EMS. Any wastes which are liable to give rise to contamination will be removed from site or placed into the quarantine skip/area (see Section 2.8 of EMS). Shut off / closure valves located on final manhole before discharge into sewer. The surface water drainage system is entirely sealed and underground to prevent any contaminate water getting into this system.

Hazard / Potential Contaminant or Situation	Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments
Contamination of surface / ground waters	Release of fire water Flood or fire waters if not contained will be washed off site and contaminate buildings / gardens	Surface waters	Site personnel/ visitors Surrounding site users/occupiers Surface waters Woodland areas Tame Valley Local Wildlife Site	A to F	Mi to S	3	Low	Refer to above row (leachate), further points below. Reference should be made to Section 5.8 of the EMS which details contingency measures in the event of adverse weather conditions i.e. heavy rainfall which could lead to the site flooding. All waste storage takes place on an impermeable concrete surface with sealed drainage and refer to Section 4.2 of the EMS in terms of daily inspections. The site is located in Flood Zone 1 and generally not at any significant risk of flooding. Reference should be made to Section 12 of the FPP which details fire water containment procedures in the event of a fire at the site. It is considered climate change will not affect the proposal given the outcome shown in application form Part B2.
Hydrocarbons including release of gases/fumes/vapours/volatiles	Fixed and mobile plant malfunction Mixing of waste/ chemicals Spillage of chemicals Overturned vehicle plant/plant failure Reaction between stored wastes Non-conforming wastes within wrapped plastic	Ground - direct contact, ingestio n Inhalatio n (of volatiles)	Site personnel/ visitors Surrounding site users/occupiers Surface waters Woodland areas Tame Valley Local Wildlife Site	A, B, D, E, F	Mi to S	3	Low	Fuel procedures shown with FPP. Strict waste acceptance procedures (Sections 3.1 - 3.4 of EMS for plastic containers and baled material). All plant manoeuvring takes place on an impermeable concrete surface with sealed drainage and refer to Section 4.2 of the EMS in terms of daily inspections. Spill kits kept close to source(s) of hazards as shown on Drawing No. GPL/3329/03. Reference should be made to Section 2.6 of the FPP in relation to preventative maintenance checks to reduce the likelihood of fixed or mobile plant failure which is considered to be source of most fires from waste sites. Any spillages identified will be dealt with in accordance with the spillage procedures outlined in section 4.1 of the EMS. Dedicated mobile quarantine skip for intercepted I wastes found during initial inspections ensuring isolation and quick removal off

Hazard / Potential Contaminant or Situation	Source(s)	Pathway	Receptor(s)	Consequences	Effect	Probability	Assessment Outcome	Remedial Action/ Recommendations/ Comments
								site. The skip may be positioned in various positions of the site depending how operations permit (see Section 2.8 of EMS). Ensure all waste storage areas are stored as per the waste storage table and locations shown on Drawing No. GPL/3329/03 to reduce the risk reactions of stored waste, fire and collisions between plant causing release of fumes.
								No gas is stored at the site.

Appendix II

SITE LAYOUT & FIRE PLAN AND RECEPTOR PLAN



KEY: Permit boundary Main River Surface water body (river / stream /

Areas with mix of residential, retail and commercial properties Residential blocks Class A, B, C roads Nearest fire hydrant HHHHHH Railway line SCH School Woodland areas

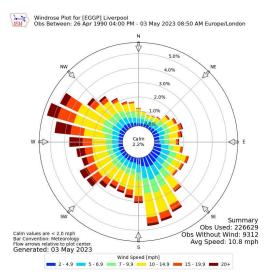
woodland)

Priority habitat inventory (deciduous

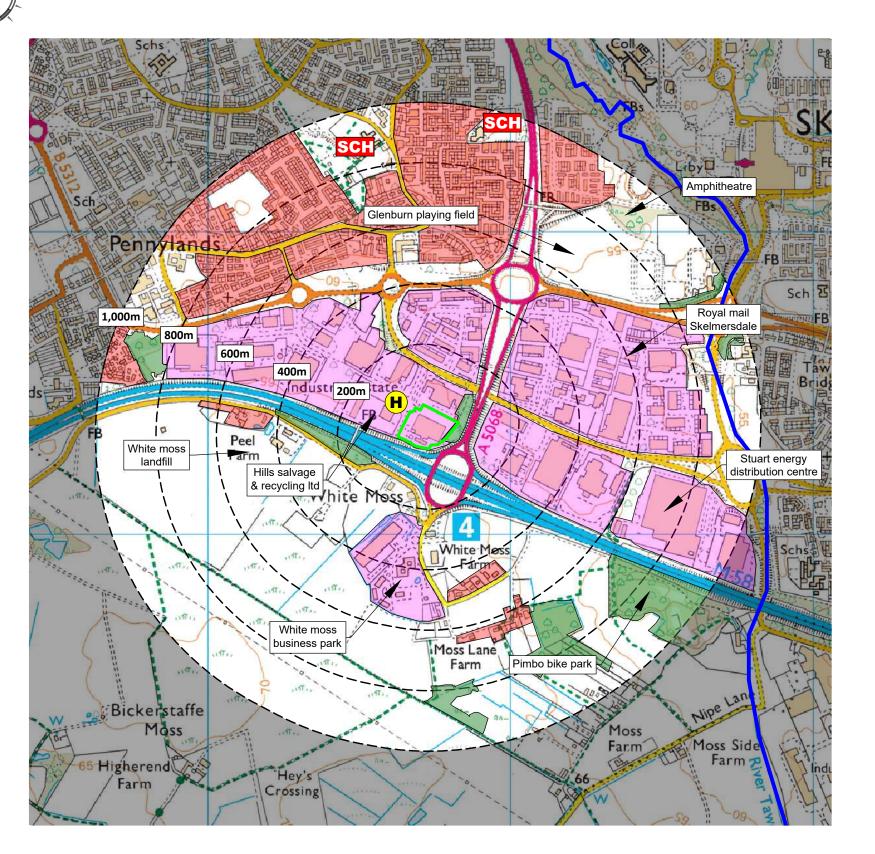
pond / pool / lake)

Workplaces (includes agriculture

industry, commerce and retail)



Compass Wind Rose for (EGGP) Liverpool Period 1990-2023 - source: Iowa State University



NOTES

- 1. Boundaries are shown indicatively.
- 2. Wind rose data shows the prevailing wind direction to be

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Oaktree Environmental Ltd Waste, Planning and Environmental Consultants



DRAWING TITLE RECEPTOR PLAN

CLIENT WL Polymer Ltd

PROJECT/SITE Gerrard Place, Skelmersdale WN8 9SF

SCALE @ A3	CLIENT NO	JOB NO
1:12,500	3329	001
·		
DRAWING NUMBE	R REV	STATUS
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Scale Bar (1:12,500) 500 m 1 k m